HVV-4915

ultraVac

A DIVISION OF Hi-Vac® CORPORATION

HVV-4915 SERIES VACUUM LOADER

Serial Number: UV-XXXX

OPERATION
SERVICE
& PARTS

MANUAL

Hi-Vac Corporation
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Marietta, Ohio 45750
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SMC Pneumatic Valves
Murphy Tachometer
Hobbs Hourmeter
Dwyer Instruments
Nason Pressure Switch
United Electric Vacuum Switch
Monitor Level Probe
Wilkerson Autodrain

INSPECTION PROCEDURES

All pieces received should be inspected for damage immediately upon receipt.

1. Damage can be most easily detected by looking for scrapes on the paint.
2. Inspect all sheet metal and structural steel for damage such as bends, kinks or breaks.
3. Check all wiring for abrasions, cuts, cracks, etc. If any are found, repair or replace before connecting to power source.
4. Check all conduit runs and fittings for defects.
5. Check vacuum pump for free rotation before starting under power for the first time after installation.
6. Compare the packing list attached to each piece of each shipment.
7. Verify the number of pieces and description of each piece shown on the packing slip.

REPORT ANY DAMAGE, NO MATTER HOW SLIGHT, IMMEDIATELY TO:

Hi-Vac® Corporation
117 Industry Road
Marietta, OH 45750
Attention: Service Department
Phone: 740.374.2306
Toll Free: 800.752.2400
Fax: 740.374.5447

WARRANTY

Hi-Vac® CORPORATION WARRANTS TO THE ORIGINAL PURCHASER OF THE **Ultra-Vac®** UNIT QUOTED HEREIN THAT THE **Ultra-Vac®** UNIT SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND SERVICE. **Hi-Vac®** CORPORATION DOES NOT WARRANT COMMERCIAL ITEMS MANUFACTURED BY OTHERS SUCH AS DIESEL ENGINES, TRUCK CHASSIS, TIRES OR MOTORS. **Hi-Vac®** CORPORATION'S OBLIGATION UNDER THIS WARRANTY SHALL BE LIMITED TO THE REPAIR OR EXCHANGE OF ANY PART OR PARTS WHICH MAY PROVE DEFECTIVE UNDER NORMAL USE AND SERVICE WITHIN THE SHORTER PERIOD OF **ONE (1) YEAR** FROM THE DATE OF DELIVERY TO THE ORIGINAL PURCHASER AND WHICH **Hi-Vac®** CORPORATION'S EXAMINATION SHALL DISCLOSE TO ITS SATISFACTION TO BE DEFECTIVE. THIS WARRANTY REQUIRES PURCHASER TO OPERATE THE **Ultra-Vac®** UNIT IN STRICT COMPLIANCE WITH THE PRINTED INSTRUCTIONS AND TO SERVICE THE **Ultra-Vac®** UNIT ACCORDING TO THE METHODS AND SCHEDULES CONTAINED IN THE **Ultra-Vac®** UNIT'S MANUAL. EVIDENCE OF PURCHASER'S SCHEDULED MAINTENANCE MUST BE REPORTED IN WRITING TO **Hi-Vac®** CORPORATION ON THE FORMS SUPPLIED TO PURCHASER IN THE **Ultra-Vac®** MAINTENANCE MANUAL. SHOULD PURCHASER BELIEVE A DEFECT HAS BEEN DISCOVERED, THE PURCHASER SHALL RETURN THE ALLEGED DEFECTIVE PART TO **Hi-Vac®** CORPORATION FOR EXAMINATION, F.O.B THE **Hi-Vac®** PLANT, **MARIETTA, OHIO**. IN THE EVENT PURCHASER DOES NOT SERVICE AND MAINTAIN THE **Ultra-Vac®** UNIT ACCORDING TO THE **Ultra-Vac®** MAINTENANCE MANUAL, THE WARRANTY IS TO BE CONSIDERED NULL AND VOID AND **Hi-Vac®** CORPORATION'S OBLIGATION HEREUNDER SHALL BE DEEMED FULFILLED.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF Hi-Vac® CORPORATION.

LIMITS OF LIABILITY

Hi-Vac® CORPORATION SHALL NOT BE LIABLE FOR AND PURCHASER ASSUMES RESPONSIBILITY FOR ALL PERSONAL INJURY AND PROPERTY DAMAGE RESULTING FROM THE HANDLING, POSSESSION OR USE OF YOUR **Ultra-Vac® INDUSTRIAL VACUUM LOADER** BY THE PURCHASER. THE LIABILITY OF **Hi-Vac®** CORPORATION ARISING OUT OF THE SUPPLYING OF YOUR **Ultra-Vac® INDUSTRIAL VACUUM LOADER**, OR ITS USE WHETHER ON WARRANTIES OR CLAIM OF NEGLIGENCE OR OTHERWISE, SHALL NOT IN ANY CASE EXCEED THE COST OF CORRECTING DEFECTS IN YOUR **Ultra-Vac® INDUSTRIAL VACUUM LOADER** AS HEREIN PROVIDED. **Hi-Vac®** CORPORATION SHALL NOT IN ANY EVENT BE LIABLE FOR ANY LABOR EXPENDED BY THE PURCHASER ON ANY PART OR PARTS OR FOR ANY SPECIAL DIRECT OR INDIRECT OR CONSEQUENTIAL DAMAGES. NO MATERIAL MAY BE RETURNED WITHOUT FIRST GETTING APPROVAL FROM **Hi-Vac®** CORPORATION. ANY GOODS RETURNED WITH SUCH APPROVAL MUST BE SENT BACK WITH ALL TRANSPORTATION CHARGES PREPAID WITHIN 30 DAYS AFTER ISSUANCE OF APPROVAL. GOODS RETURNED AND ACCEPTED IN ACCORDANCE WITH THE ABOVE CONDITIONS WILL BE CREDITED ON THE BASIS OF THE PRICES PAID AT TIME OF SHIPMENT.

MESSAGE TO NEW OWNER

Congratulations on your purchase of a new **Ultra-Vac® Vacuum Loader.** This manual is supplied for your convenience to assist you in adequately maintaining, servicing and operating your **Ultra-Vac® Vacuum Loader.**

Your **Ultra-Vac® Vacuum Loader** has been designed to give you many years of dependable, trouble free service, which can be attained only through conscientious care by your personnel. Therefore, cooperation, practice and skill on the part of all personnel associated with your **Ultra-Vac®** is necessary to maintain maximum productivity.

The material in this manual has been carefully and thoughtfully prepared to provide a simple and understandable guide. It should be carefully read and thoroughly understood by all personnel responsible for your **Ultra-Vac®** before engaging in both operation and the maintenance of the system.

The very best wishes from our entire organization are extended to you with the assurance that you will enjoy long and dependable service from this **Ultra-Vac®**.

SAFETY PRECAUTIONS

CAUTION

SOME DO'S AND DON'TS BEFORE GETTING STARTED WITH YOUR NEW **Ultra-Vac® SYSTEM.**

The safety of the operator is of great importance to us at **Hi-Vac®** Corporation. The decals, shields, guards and other protective features that are designed into the machine are there for your protection. A high percentage of the accidents that occur are due to careless behavior or misuse of machinery. We ask you to be a careful operator and to properly service your machine.

PROCEED WITH CAUTION

Before attempting to operate the machine, read carefully and understand all instructions contained in the manual.

IT IS VERY IMPORTANT THAT YOU UNDERSTAND THE FOLLOWING SAFETY WARNINGS IN FULL. INJURY OR DEATH TO PERSONNEL, AND/OR DAMAGE TO MACHINE CAN RESULT.

* Unit should **ONLY** be operated by thoroughly trained personnel.
* **Do not** put your face or any portion of head in front of the nozzle.
* Hearing protection **MUST** be worn by operator and those working near the vacuum loader.
* **Do not** operate machinery without proper guards in place. Keep away from moving objects.
* **Do not** put your hand in front of the intake nozzle while in operation.
* **Do not** vacuum any flammable liquid.
* Check that unit is properly stopped and parking brake applied so unit will not tip or roll.
* **Do not** lubricate, adjust or repair the **Ultra-Vac®** unit unless engine is shut down.
* **Do not** operate the unit with the levelprobe "ON/OFF" switch in the "OFF" position.

* **NEVER** raise body when parked on uneven ground.

* **NEVER** raise the body if baghouse is overloaded.

* **NEVER** raise body unless the tailgate is fully open.

* **NEVER** operate tailgate while body is in elevated position.

* **NEVER** move the **Ultra-Vac®** unless the body is in the fully down position.

* Clear the area behind the **Ultra-Vac®** of all personnel before opening or closing the tailgate.

* **NEVER** inspect or work under the raised body without the safety body prop in place.

* **NEVER** inspect or work under the open tailgate without a tailgate prop in place.

* **Do not** operate the **Ultra-Vac®** unit while wearing loose clothing, watches or rings.

* Periodically check for any loose bolts or set screws.

NOTE:

AS WITH ANY TYPE OF HEAVY DUTY EQUIPMENT, CAUTION MUST BE EXERCISED IN ITS PROPER USE.

WARNING:

FAILURE TO COMPLY WITH ANY OF THE ABOVE SAFETY INSTRUCTIONS OR THOSE THAT FOLLOW WITHIN THIS MANUAL MAY RESULT IN DAMAGE TO EQUIPMENT AND/OR SEVERE INJURY OR DEATH!

PLEASE REMEMBER:

SAFE OPERATION BEGINS WITH A SAFE OPERATOR. WE ASK YOU TO BE THAT TYPE OF OPERATOR.

OPERATIONS

OPERATIONS

PRESTART PROCEDURES

Before prestarting your Ultra-Vac® unit, be sure you have read and understood all of the safety warnings and precautions located in the Machine Safety section.

1 Truck must be located on level ground and set trailer brake.

2 Visually inspect the unit so that there are no obstructions which may cause harm to machine or operating personnel.

3 Check oil level in Vacuum Pump and Transfer Case.

4 Check oil and coolant levels in Engine.

5 Check Hydraulic oil level and add if necessary.

6 Check all Hydraulic hoses and fittings for leaks. Repair if necessary.

7 Check that all doors are closed and locked.

8 Attach vacuum loading hose. Remove dust cap from the end of hose.

You are now ready to start your **Ultra-Vac®** unit.

OPERATIONS

START-UP PROCEDURES

Before starting up your Ultra-Vac® unit, Be sure you have done all the pre-start procedures located on the previous page.

1 Start the chassis engine. Be sure that the chassis parking brake has been applied.

2 Allow Engine to idle until air pressure is built up before engaging Vacuum Pump.

WARNING: The Transfer case air system will not function properly until air pressure is at least 60 psi.

3 Depress the clutch pedal to disengage the transmission. Switch the “Road/ Pump” switch located on the dash to the “Pump” position. Put the transmission in the gear indicated on the label located on the dash. Release the clutch.

4 At this point the rear drive shaft should be disengaged and hydraulic system is on.

5 At engine idle speed, Depress the clutch pedal and Switch the “Blower On/Off” switch to the “On” position. Release the clutch. At this time the blower will be turning. Be sure to only engage and disengage at idle speed only.

WARNING: Never engage blower above 1,000 RPM’s.

6 After Vacuum Pump is engaged, switch the “Auto/Manual “ switch to the desired mode and increase the engine speed until you are at desired speed.

WARNING: Level Probe “ON/OFF” switch must be “ON” at all times during vacuuming operations.

Once the unit is at operating speed, you may begin loading material. Periodically check gauges to ensure the unit is running properly.

The **Ultra-Vac®** has built-in shut downs. If a shut down occurs, immediately stop work and remedy the situation.

OPERATIONS

OPERATIONAL MODES

This unit has two operational modes. They can be selected at the side control panel.

WARNING: If your unit is equipped with a Level Probe "ON/OFF" switch the switch must be in the "ON" position during vacuuming operations. Failure to operate the unit in this manner could result in damage to equipment or severe injury or death.

AUTOMATIC: The engine increases speed until it reaches a preset maximum operational blower speed. A hopper full light will lower the engine speed back to an idle condition. At this point the box must be emptied before the operations can continue.

MANUAL: In this mode engine speed it controlled through the throttle emulator. Likewise a hopper full light will return the engine to a idle condition until the hopper has been emptied.

OFF/RESET: This switch position will allow the throttle to be used for dumping the box.

SHUTDOWN PROCEDURES

Before stopping unit, allow the Ultra-Vac® to run for a moment to let the lines clean out.

1 At the side control panel, move the mode switch to the OFF/RESET position. At this point the engine should return to an idle condition.

WARNING: Never disengage Blower above 1,000 RPM's.

2 If time allows, let Vacuum Pump run at low RPM to cool down.

3 On the dash disengage the blower by depressing the clutch and moving the blower switch to the off position. Move the PTO switch to the OFF or Disengaged position. Release the clutch.

4 Turn the ignition key switch to "Off" position.

DUMPING PROCEDURES

Before dumping material out of the collector body, be sure that the parking brake is on and the unit is on level ground. Also ensure there are no personnel or obstructions near the **Ultra-Vac®**. This could result in damage to machinery or injury to personnel. If equipped with manual dump door locks on the baghouse and cyclone hopper dump doors, release the locks to allow the dump doors to open during each dumping of the collector body.

CAUTION: Do not raise the body if the baghouse is overloaded.

WARNING: Failure to do so can result in sever injury or death, and/or damage to the equipment.

Dumping The Body:

1 Pull the handle valve marked “Lock/Unlock” to unlock tailgate prior to raising. Be sure that there are no personnel at the back of the **Ultra-Vac®** unit.

2 Pull the handle valve marked “Tailgate Open/Close” to open the tailgate. Be sure that there are no personnel at the back of the **Ultra-Vac®** unit.

WARNING: Never open the tailgate without first unlocking. This will cause damage to the equipment.

3 Pull the valve marked “Raise/Lower” to fully raise the collector body.

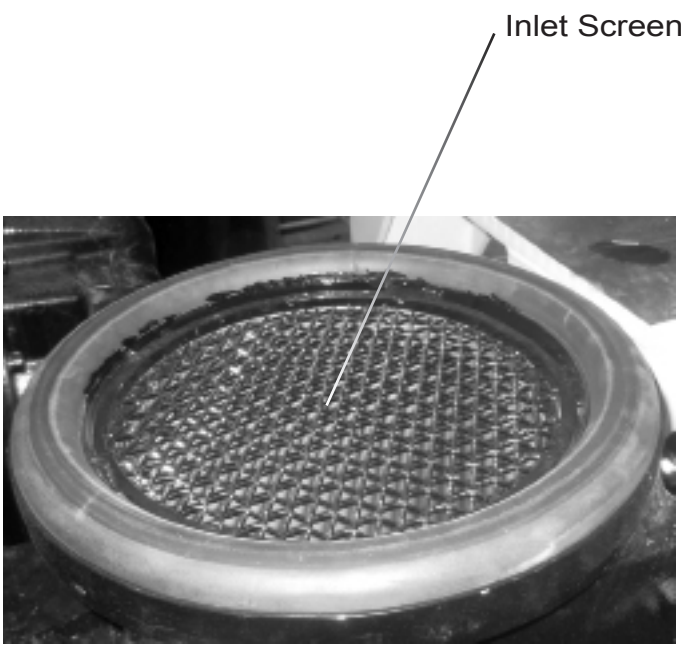
WARNING: Be sure that the Ultra-Vac® is on a level surface before raising the collector body. Possible tipping may occur.

4 Pull the valve marked “Vibrator On/Off” to run the hydraulic vibrator to loosen materials in the collector body, baghouse and cyclone hopper. Ensure the baghouse and cyclone hopper are completely empty of material after each dumping cycle.

DUMPING PROCEDURES
(continued)

5 After inspecting the Blower Inlet Screen, lower the collector body, close the tailgate, and then lock the tailgate locks.

WARNING: Never work under body or tailgate in the raised position unless the appropriate props are in place. Never move the Ultra-Vac® with the collector body in the raised position.



AUTOMATIC SHUTDOWNS (MACHINE)

There are two types of automatic shutdowns on the HVV-4915; Machine shutdowns, which are shutdowns directly related to the Unit, and Engine shutdowns. You will have to correct the problem before restarting.

MACHINE SHUTDOWNS - The following conditions will cause the engine to return to an idle condition or stop the engine.

1 HOPPER FULL

Caused by material filling up inside the collector body and activating the Level Probe. This is indicated by a light on the control panel. Simply dump material out of the collector body and move the mode switch to the “Vac OFF/ Reset” position. The Hopper Full light should go out. Return the mode switch to either the Automatic or Manual positions and you may then continue loading. Always return the Level Probe “ON/OFF” switch to the “ON” position before resuming vacuuming operations.

2 EMERGENCY STOP BUTTON

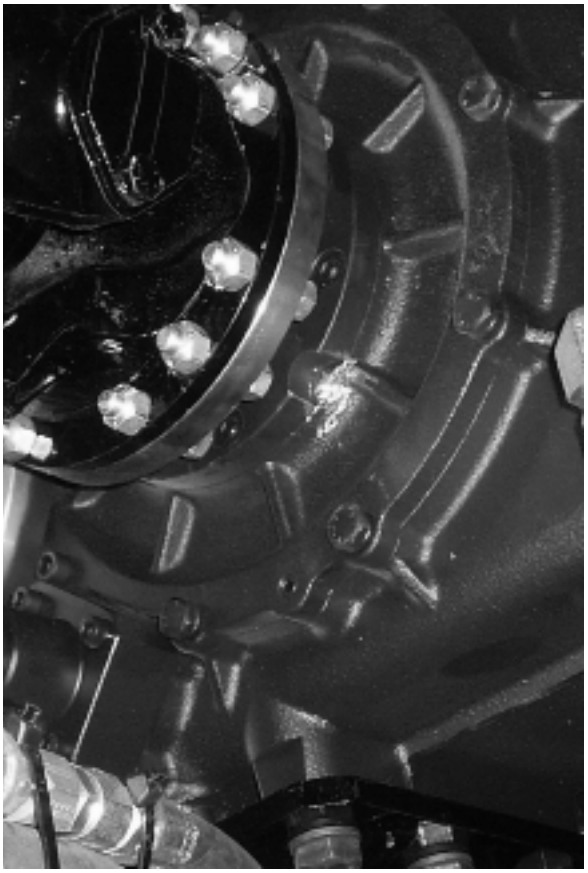
In the event of an emergency situation press the emergency stop button. This button will remove power from the control panel and will stop the engine. To resume loading pull out on the Emergency Stop button and follow the start up procedure.

AUTOMATIC SHUTDOWNS (ENGINE)

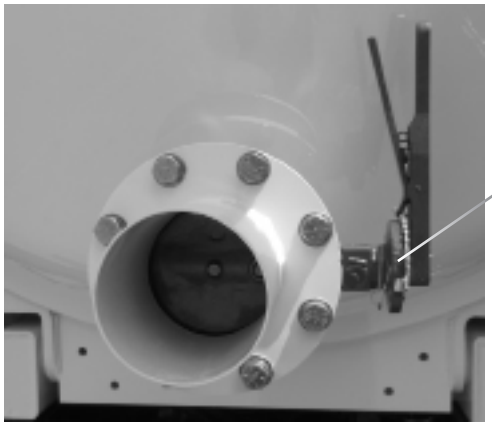
ENGINE SHUTDOWNS - See the Chassis Manual for instructions on engine warnings and fault displays.

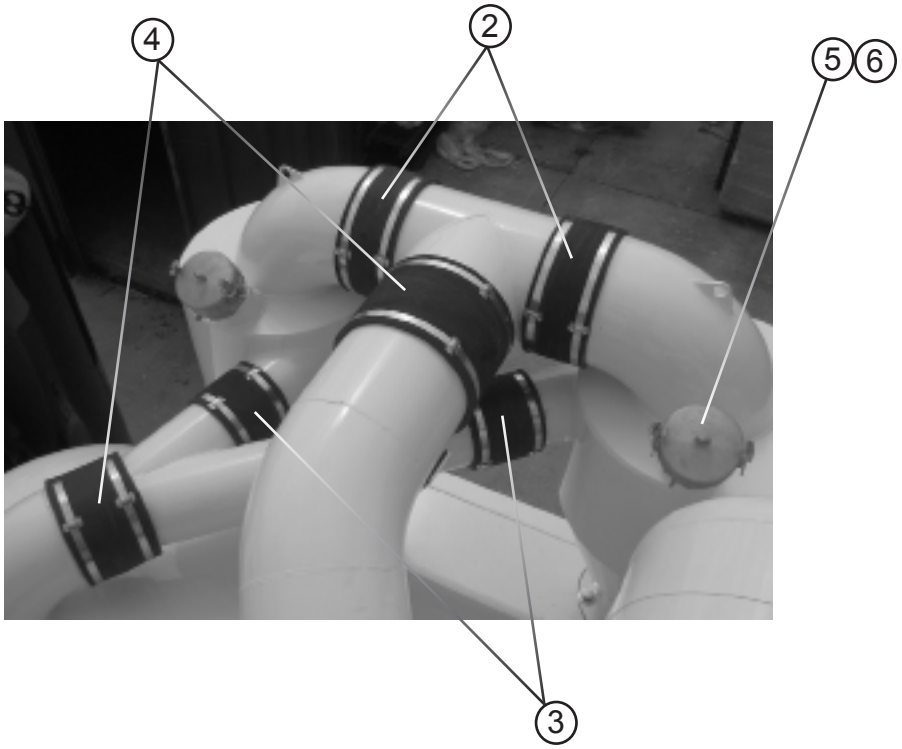
MACHINE SPECIFICATIONS

OMSI PTO
PART NO.A249437



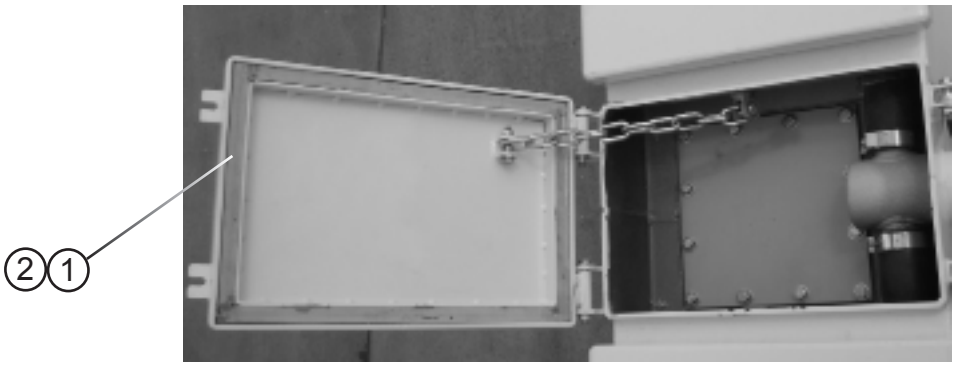
BODY

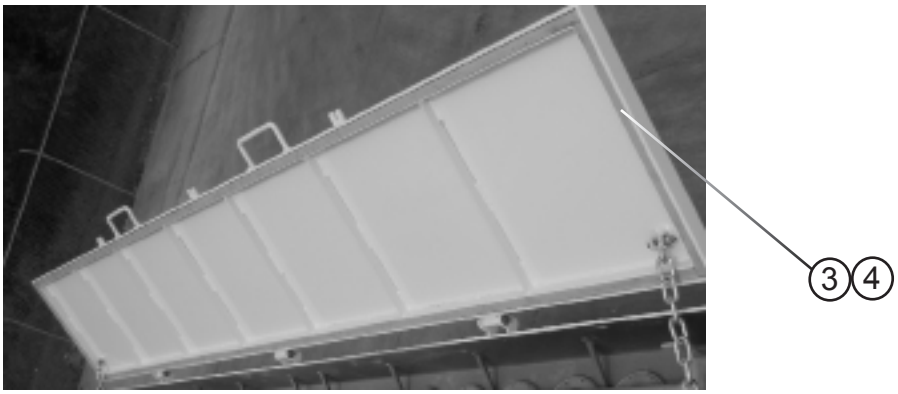


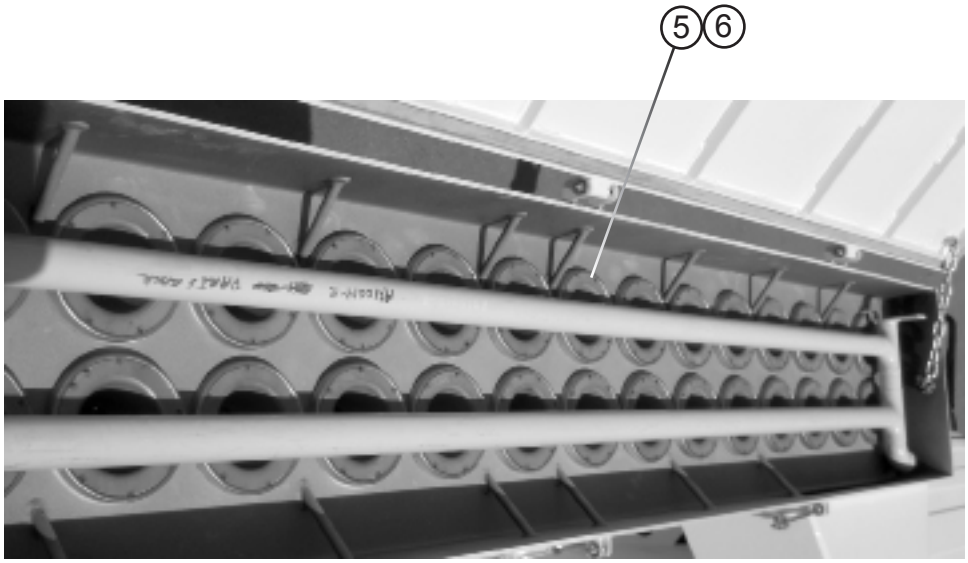


ITEM	PART #	DESCRIPTION	QTY
1	U4307-0008	VALVE,BUTTERFLY,6",HAND LEVER ACTUATOR	1
2	18-0539	SLEEVE,10"PIPE X 5"LG,7/16"WALL,EPDM	2
3	18-0536	SLEEVE,6" PIPE X 6"LG,7/16 WALL,EPDM	2
4	18-0538	SLEEVE,10"PIPE X 8" LG,7/16 WALL,EPDM	1
5	10-0204	CAMLOCK,4" MALE X 4"FNPT,TYPE A ALUM	2
6	10-0219	CAMLOCK,4,DUST CAP,ALUM	2

BODY

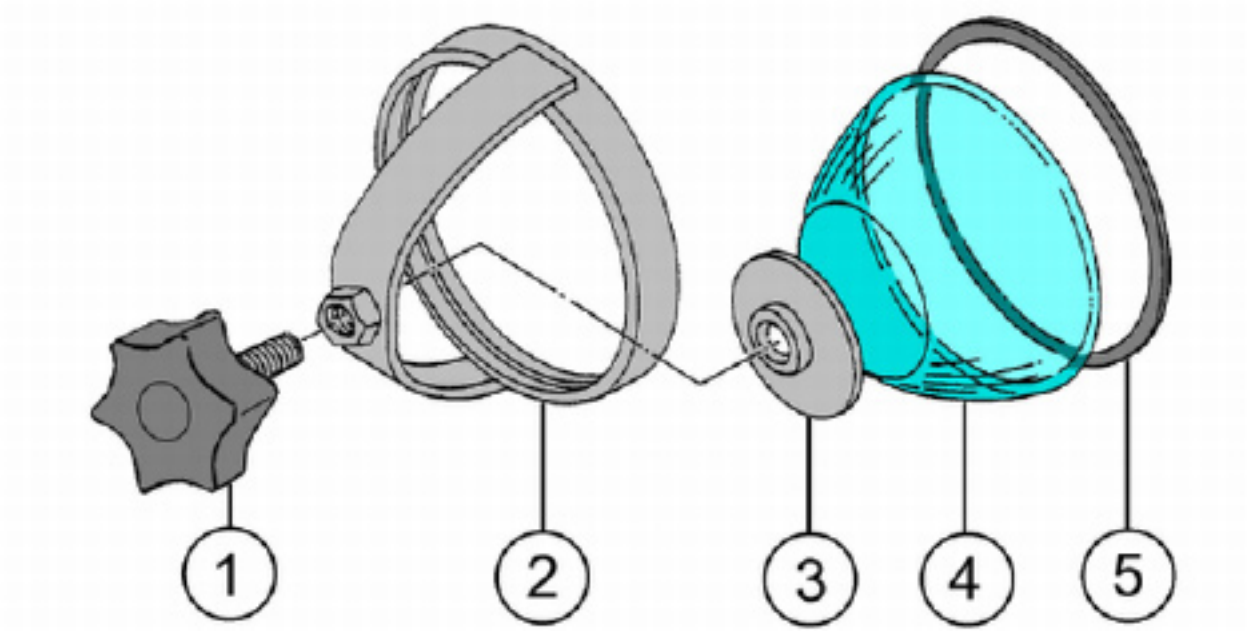






ITEM	PART #	DESCRIPTION	QTY
1	U1007-4237	DOOR,CENTER,BAGHOUSE	1
2	U3807-0065	GASKET ASSY,BAGHOUSE,CENTER,HVV4915	1
3	U1007-4236	DOOR,BAGHOUSE	2
4	U3807-0064	GASKET ASSY,BAGHOUSE,FRONT&REAR,HVV4915	2
5	U3701-0081	FILTER BAG,16OZ MICROFINER,60-1/2”L	68
6	U3702-0032	CAGE,FILTER,STL,60” LG	68

SIGHT EYE ASSEMBLY
(2) REQUIRED

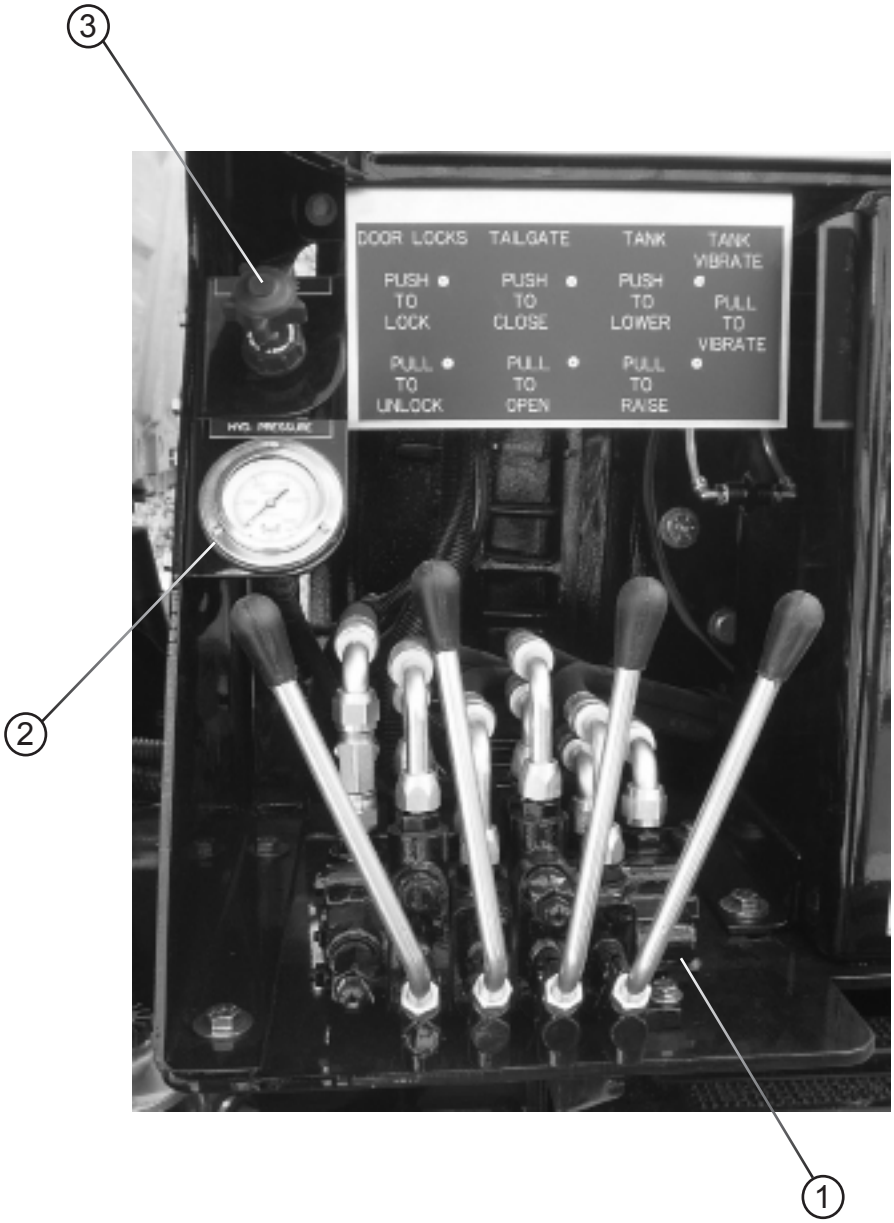


ITEM	PART #	DESCRIPTION	QTY
1	A153013	HAND WHEEL, SIGHT EYE	1
2	A153000	FRAME, SIGHT EYE, THREADED, 1/2” x 13	1
3	A153014	PRESSURE PAD, SIGHT EYE, CAST	1
4	A152890	SIGHT GLASS	1
5	A153012	GASKET, SIGHT EYE, RUBBER	1

HYDRAULIC SYSTEM

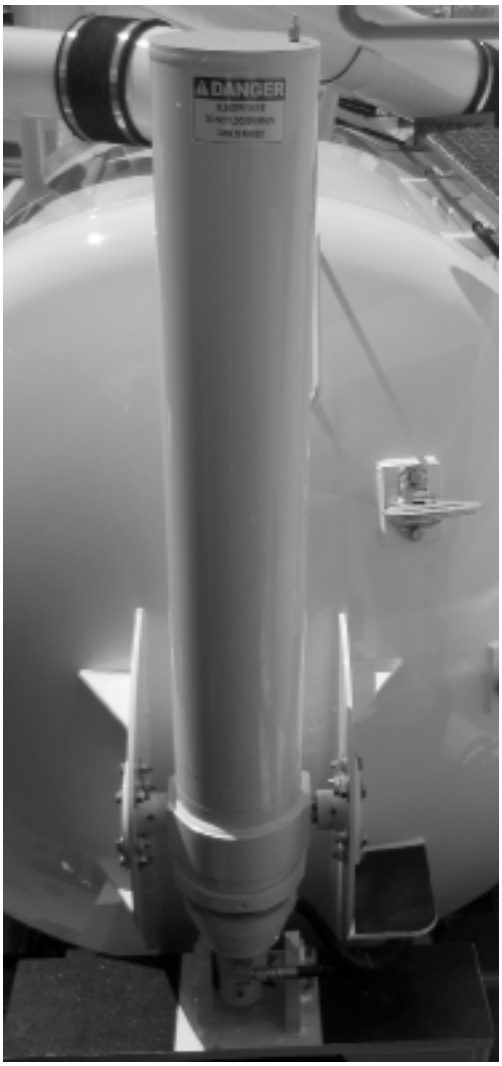
HYDRAULIC PUMP
PART NO.U3902-0085

HYDRAULIC SYSTEM

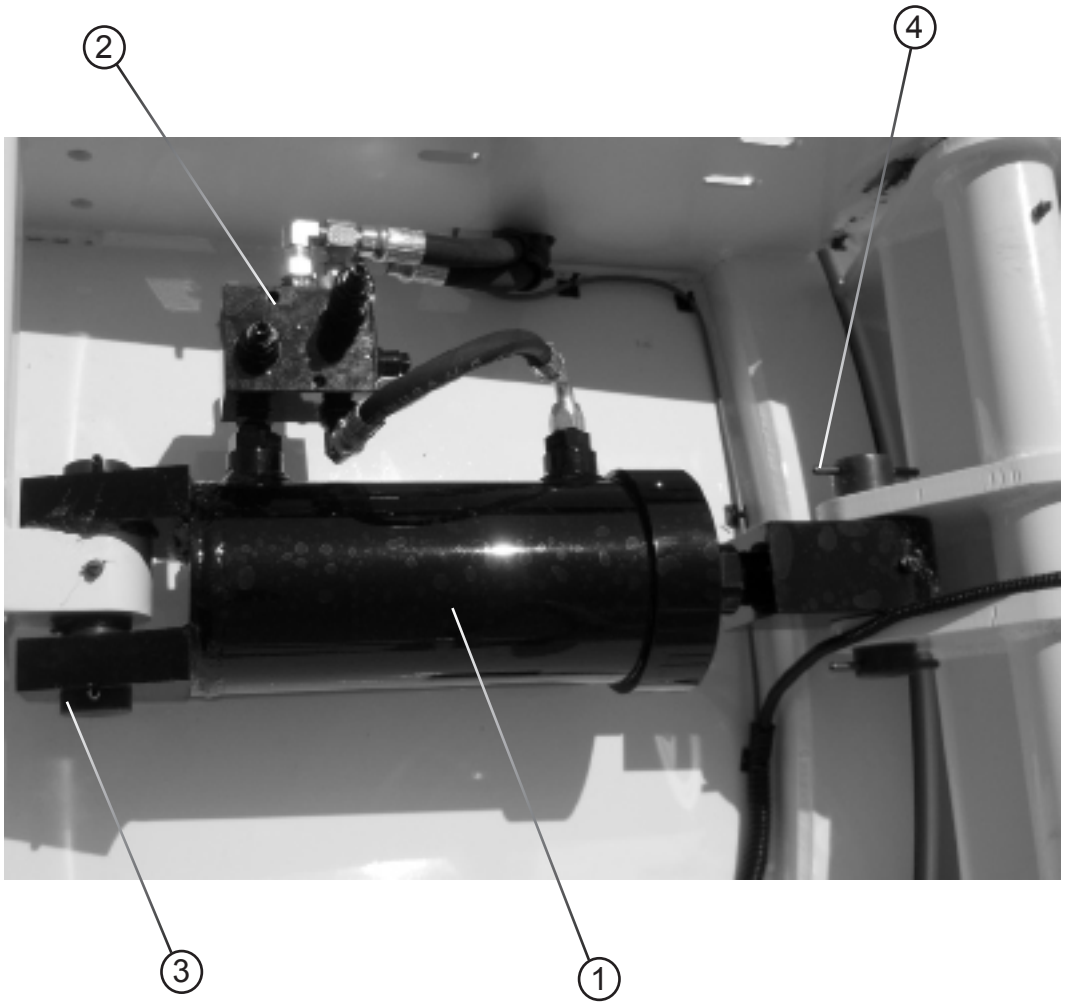


ITEM	PART #	DESCRIPTION	QTY
1	U3904-0158	VALVE,HYD,4 SPOOL,DRYVAC W/PO CHKS,W/STP	1
2	A131786	GAUGE,PRESSURE,0-5K PSI, W/FLANGE,STAB	1
3	A383925	POTENTIOMETER,FOR USE W/CUMMINS&MERCEDES	1

LIFT CYLINDER ASSEMBLY
PART NO.U3903-0053



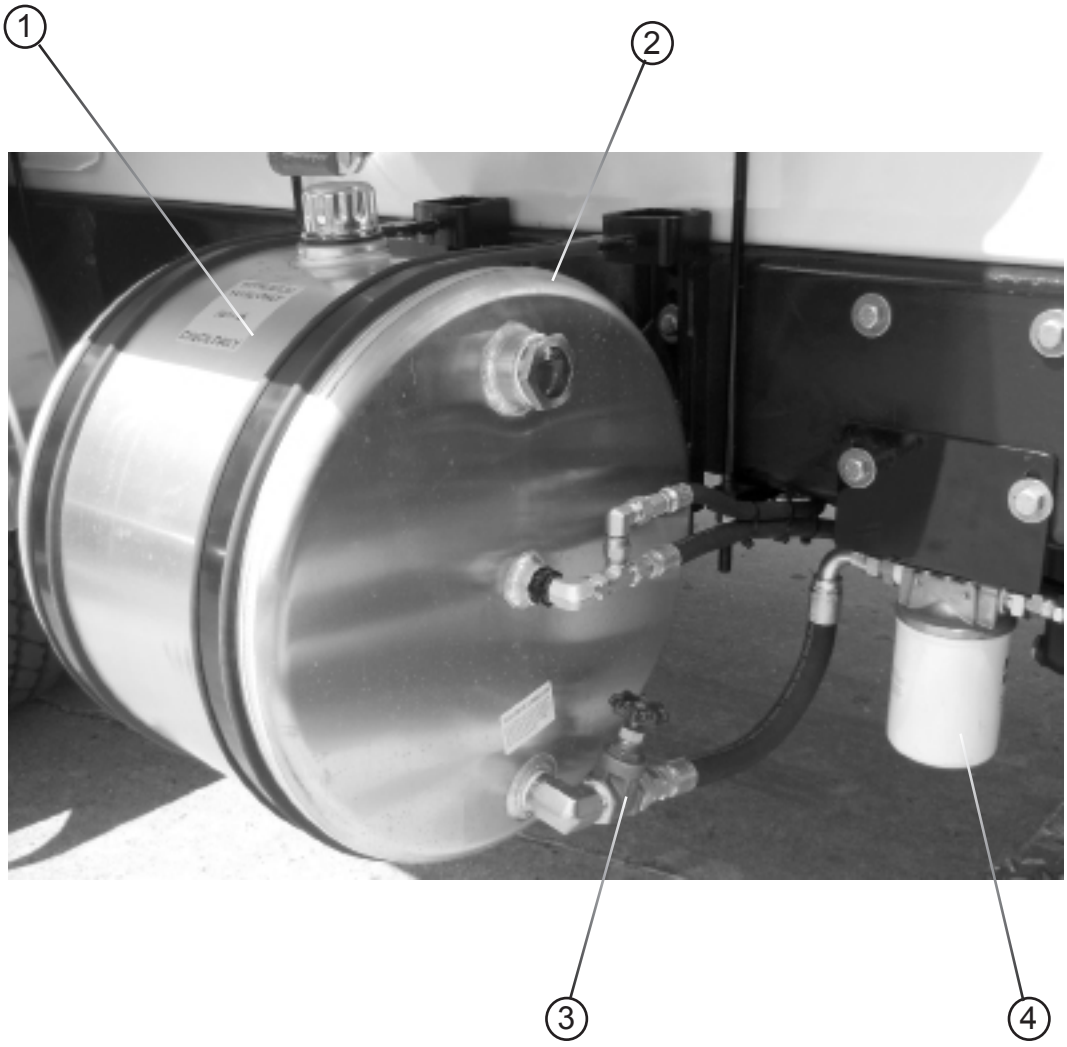
REAR DOOR HYDRAULICS



ITEM	PART #	DESCRIPTION	QTY
1	A110015-1	CYLINDER,HYDRAULIC,TANK DOOR,5” X 6.75’	1
2	A110019	VALVE,CHECK/RELIEF,INTEGRATED ASSEMBLY	1
3	A246183	PIN,PIVOT,REAR DOOR CYLINDER	2
4	08-0020	PIN,SPRING,1/4” DIA X 3-1/2”LG,PLN STL	4

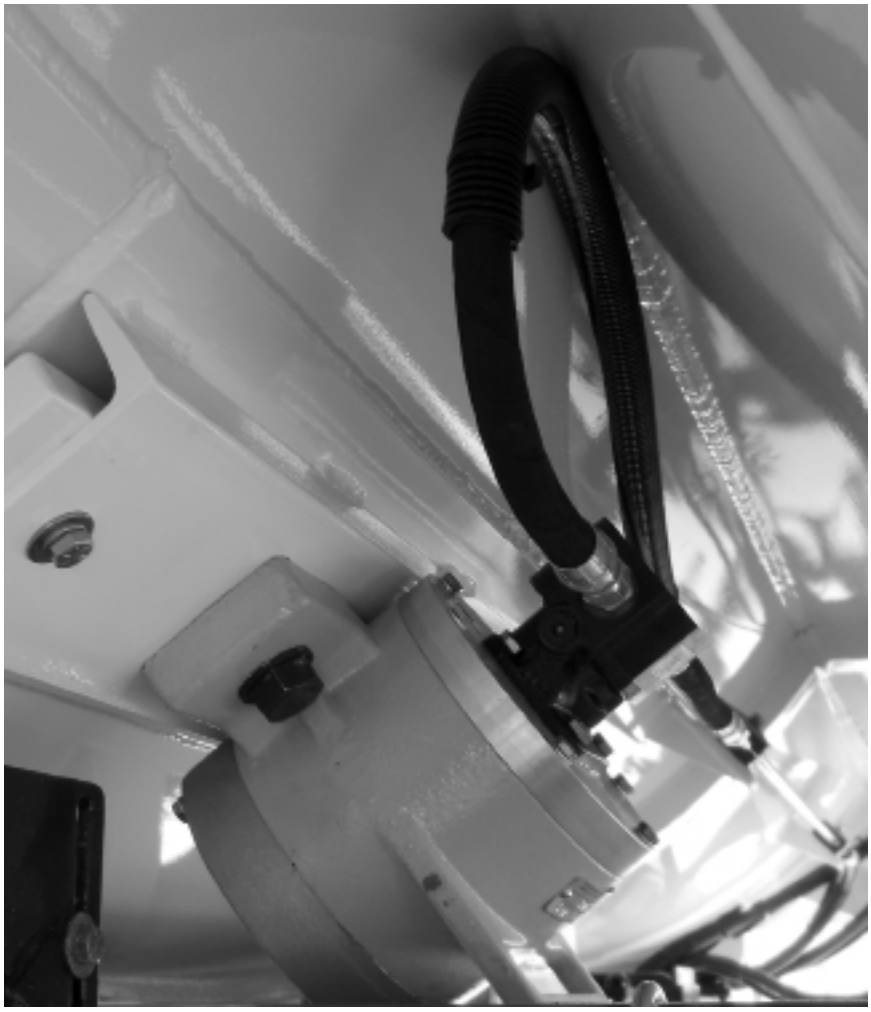
CYLINDER & WEDGE ASSY (UPPER/LOWER DOOR)
PART NO.A246523-P

35 GALLON HYDRAULIC TANK



ITEM	PART #	DESCRIPTION	QTY
1	U3907-0038	TANK,HYDRAULIC,35GAL.,W/BREATHER FILTER	1
2	A110580	SIGHT EYE,2” OIL LEVEL	1
3	A140030	VALVE,GATE,1-1/4” BRASS,MO	1
4	A110515	FILTER ASSY.,HYD.,1-1/4”NPT,25M ELEMENT	1

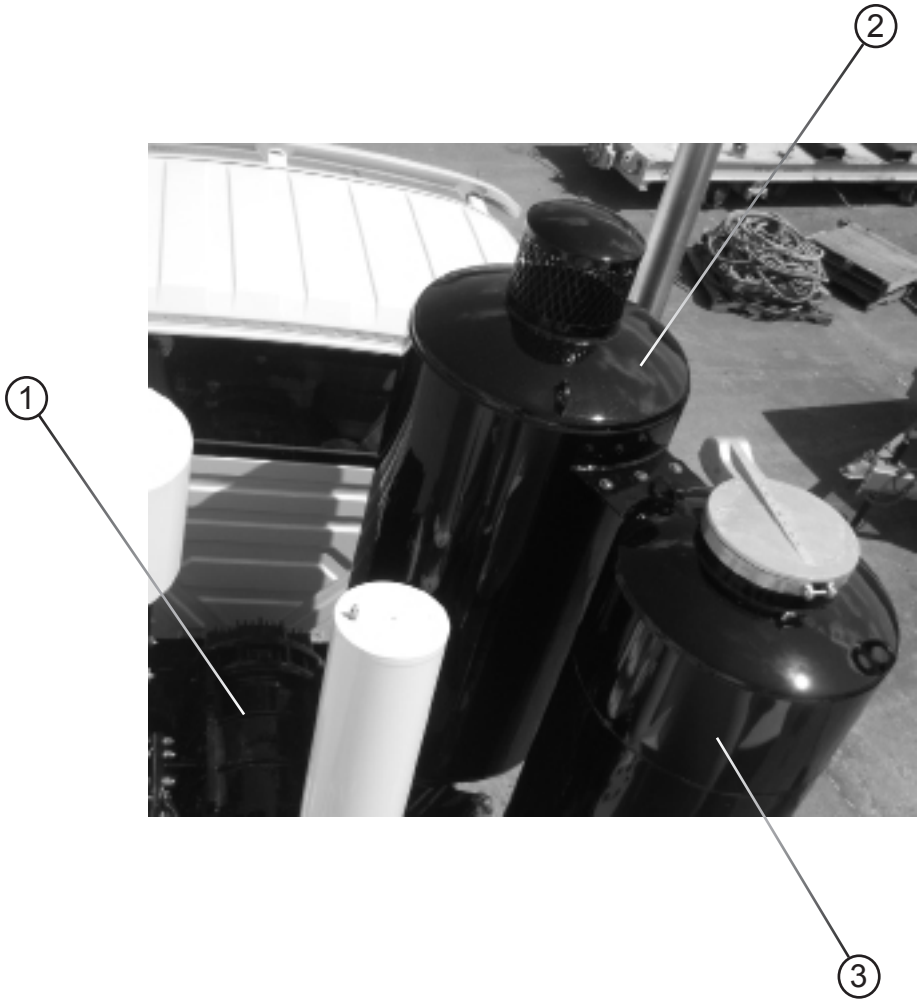
HYDRAULIC VIBRATOR
PART NO.U3917-0007



HYDRAULIC HOSE KIT
PART #U4901-0069

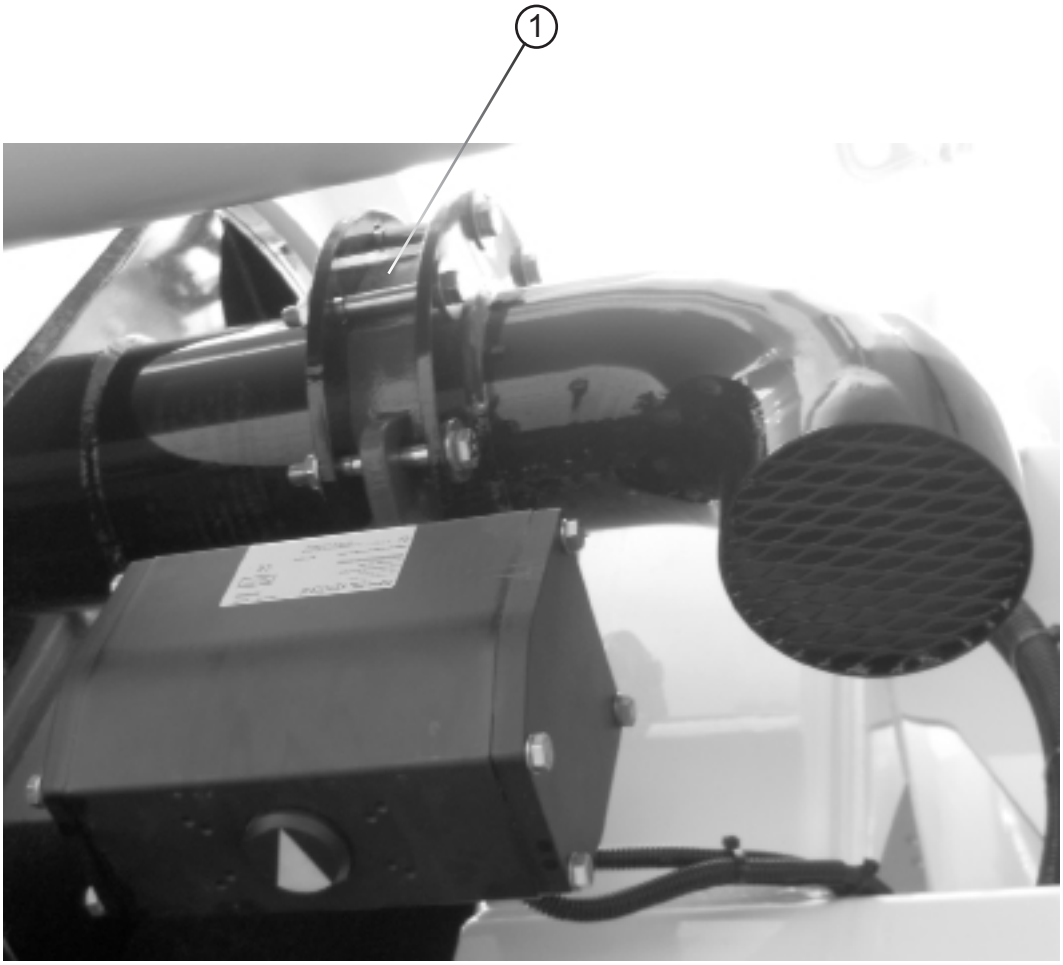
ITEM	PART #	DESCRIPTION	QTY
1	U4901-0069-01	HOSE ASSY,1"-R2-19,#16FJICSX#16FJICSSR90	1
2	U4901-0069-02	HOSE ASSY,3/4"-R2-26,#12FJICSX#12FJICS	1
3	U4901-0069-03	HOSE ASSY,5/8"-R2-93,#10FJICSX#10FJICSSR	1
4	U4901-0069-04	HOSE ASSY-5/8"-R2-138,#10FJICSX#10FJICSS	1
5	U4901-0069-05	HOSE ASSY,1/2"-R2-123,#8FJICSX#8FJICSLR9	3
6	U4901-0069-06	HOSE ASSY,1/2"-R2-123,#8FJICSX#8FJICSSR9	3
7	U4901-0069-07	HOSE ASSY,1/2"-R2-51,#8FJICSX#8JICS	3
8	U4901-0069-08	HOSE ASSY,1/2"-R2-23,#8FJICSX #8FJICS	1
9	U4901-0069-09	HOSE ASSY,1/2"-R2-135,#8FJICSX#8FJICS	2
10	U4901-0069-10	HOSE ASSY,1/2"-R2-122,#8FJICSX#8FJICSLR9	1
11	U4901-0069-11	HOSE ASSY,1/2"-R2-117,#8FJICSX#8FJICSSR9	1
12	U4901-0069-12	HOSE ASSY,1/2"-R2-111,#8FJICSX#8FJICS	2
13	U4901-0069-13	HOSE ASSY,1/2"-R2-41",#8FJICSX#8FJICS	3
14	U4901-0069-14	HOSE ASSY,1/2"-R2-39,#8FJICSX#8FJICS	2
15	U4901-0069-15	HOSE ASSY,1/2"-R2-63,#8JICSX#8FJICS	1
16	U4901-0069-16	HOSE ASSY,1/2"-R2-70,#8FJICSX#8FJICS	1
17	U4901-0069-17	HOSE ASSY,3/8"-R2-11.5,#8FJICSX#8FJICS	1
18	U4901-0069-18	HOSE ASSY,3/8"-R2-21,#6FJICSX#8FJICS	1

BLOWER & SILENCERS



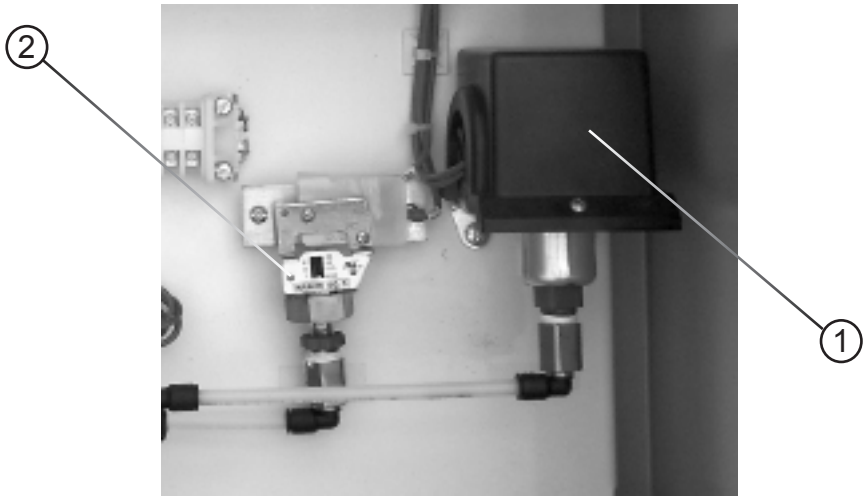
ITEM	PART #	DESCRIPTION	QTY
1	03-0108	BLOWER,HIBON 8702,BH-CCW,HVV	1
2	U4201-0333	SILENCER,INTAKE,HVV5015,HIBON 8702	1
3	U4201-0334	SILENCER,EXHAUST,HVV5015,HIBON 8702	1

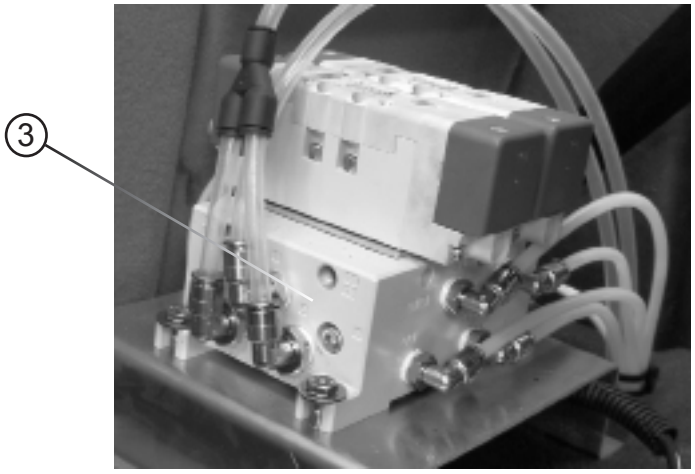
6” AIR OPERATED VACUUM RELIEF,HVV4915
PART #UV1-9171



ITEM	PART #	DESCRIPTION	QTY
1	16-0347	VALVE, BUTTERFLY, 12VDC	1

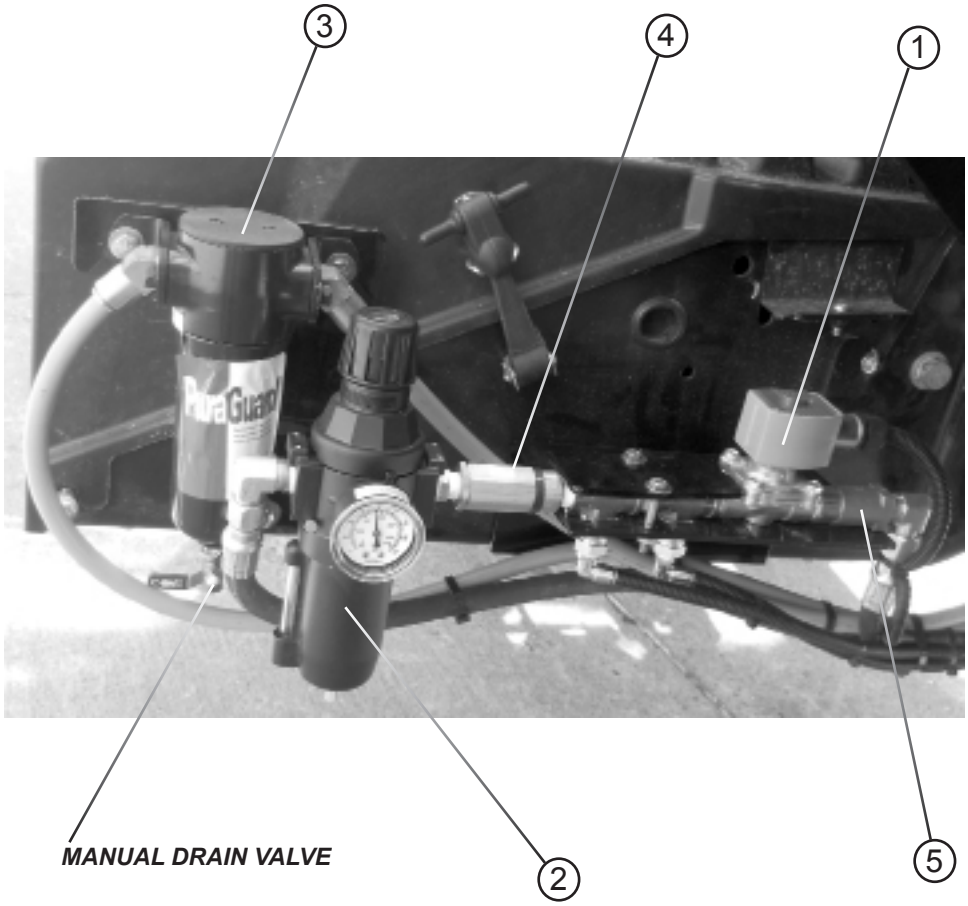
PNEUMATIC SYSTEM





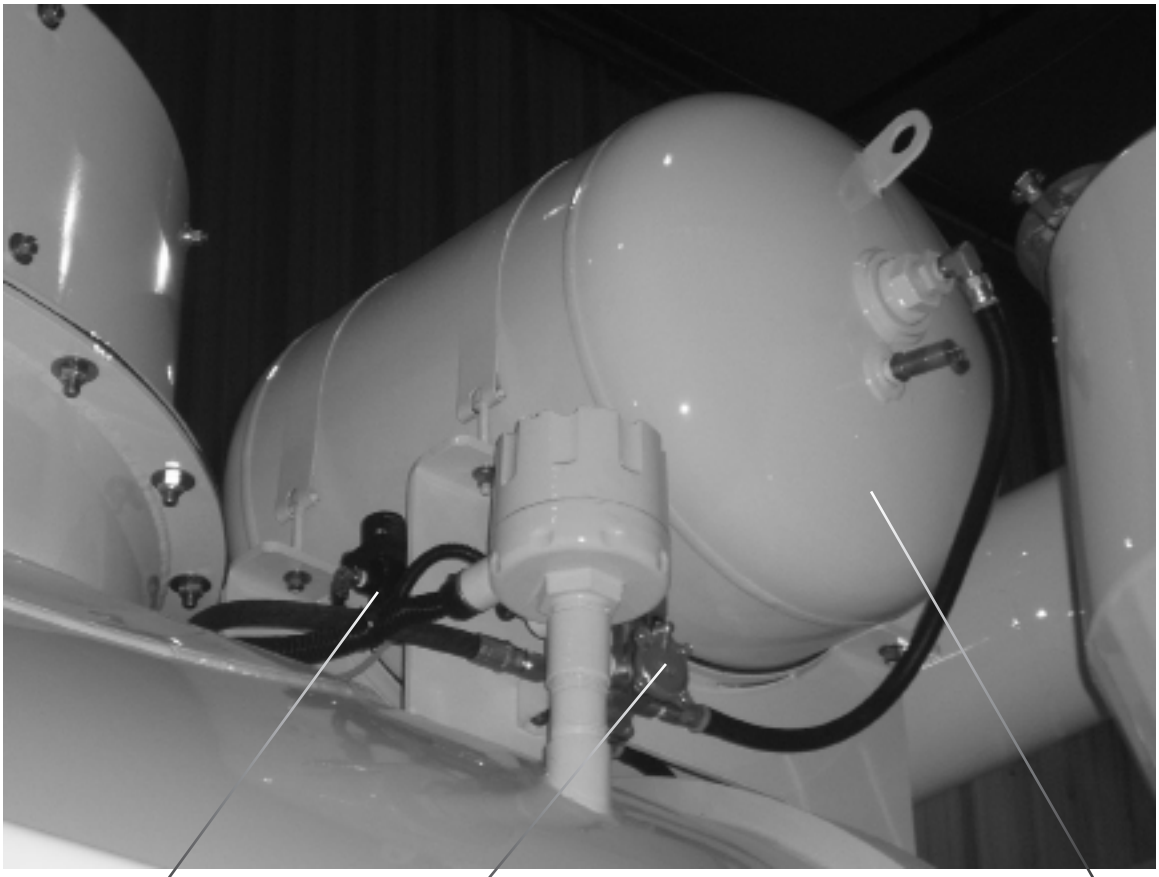
ITEM	PART #	DESCRIPTION	QTY
1	13-0100	VSWITCH,VACUUM,0-30” HG	1
2	A249447	SWITCH,PRESSURE,20-120 PSI,MR,1/8MNPT	1
3	A383781	VALVE ASSY,2SPOOL,4WAY,12V,DRYVAC	1

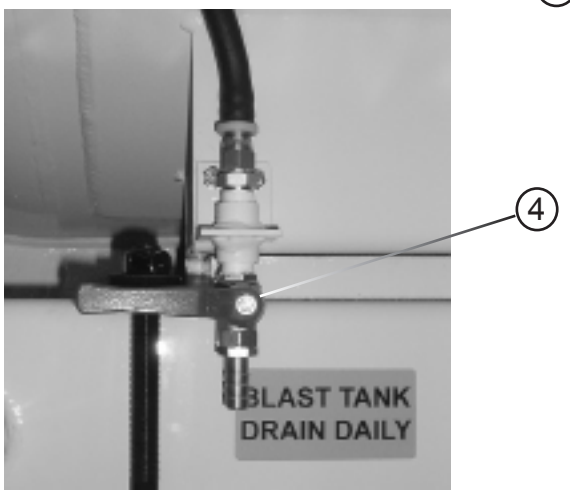
PNEUMATIC SYSTEM



ITEM	PART #	DESCRIPTION	QTY
1	15-0453	VALVE,SOLENOID,12VDC	1
2	15-0044	REGULATOR,QIX INT FIL	1
3	U4003-0140	FILTER,PURAGUARD AIR SYSTEM	1
4	U4003-0141	VALVE,PRESSURE PROTECTION,1/2” X 3/8”NPT	1
5	U3904-0027	VALVE,CHECK,1/2”	1

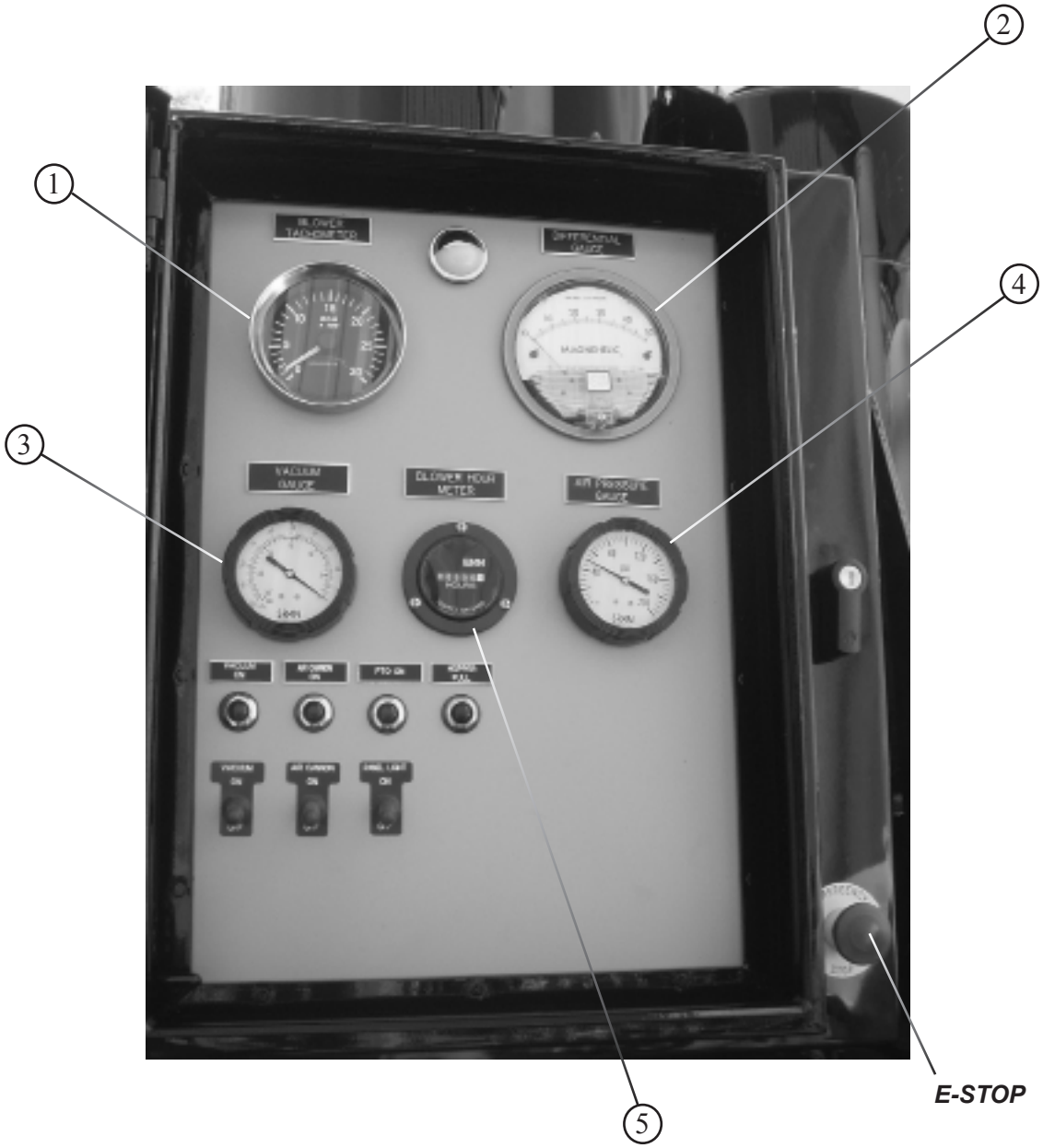
PNEUMATIC SYSTEM





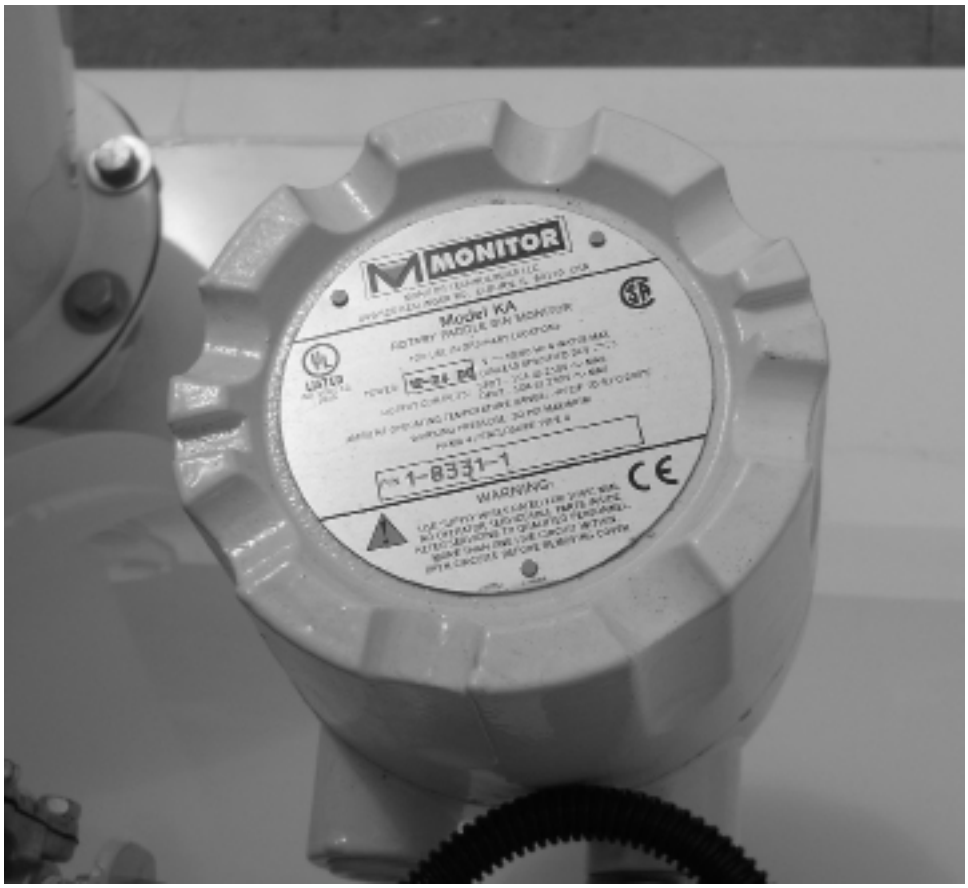
ITEM	PART #	DESCRIPTION	QTY
1	A383844	VALVE,AIR,3WAY,1/2”,12V DC	1
2	A249433	AIR CANNON,GLOBAL #GW4-20-30,DRY VAC	1
3	U0101-0729	VALVE,AUTODRAIN,.38NPT	1
4	A151550	PETCOCK,3/8”	1

ELECTRICAL SYSTEM



ITEM	PART #	DESCRIPTION	QTY
1	A383409	TACHOMETER,MURPHY,12V,7-21PUL/REV	1
2	U4008-0002	GAUGE,DIFFERENTIAL PRESSURE,0-50” WC	1
3	U4008-0001	GAUGE,VACUUM,0-30”HG,PANEL MOUNT	1
4	U4008-0004	GAUGE,AIR PRESSURE,0-200 PSI	1
5	A120040	HOURMETER,HOBBS,10-80VDC,3-HOLE ROUND	1

LEVEL PROBE,MONITOR,12VDC,KA SRS
PART NO.27-0005



SPARE PARTS LIST

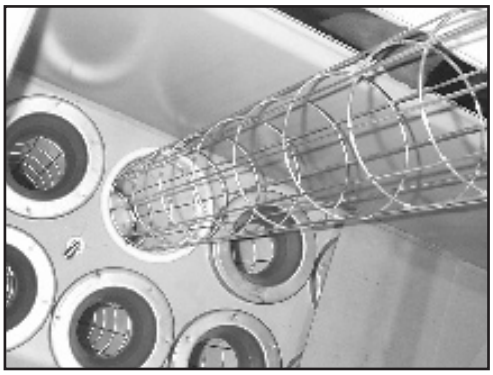
ITEM	PART #	DESCRIPTION	QTY
1	U3807-0064	GASKET ASSY,BAGHOUSE,FRONT&REAR	2
2	U3807-0065	GASKET ASSY,BAGHOUSE,CENTER	1
3	U3803-0031	GASKET,FLANGE,150#,12”,HIGH TEMP SIL	2
4	U3807-0023	GASKET,10” STANDPIPE, FOR 9 CU. YD. BOX	1
5	A191100-NH	GASKET,REAR DOOR,18’-6”,W/O HOLE	1
6	U3701-0081	FILTER BAG,16oz MICROFIBER,60 1/2 LG.	68
7	U3702-0032	CAGE,FILTER,STL,60” LG	68
8	U3803-0032	GASKET,BLOWER INLET,HIBON 8702,HI TE SIL	1
9	03-0108 GASKET	GASKET, BLOWER TO MANIFOLD	1
10	U3809-0093	GASKET,DUMP DOOR	4
11	A110515	FILTER ASSY.,HYD.,1-1/4”NPT,25M ELEMENT	1
12	20-0069	FILTER TUBE,PRESSURE DIFFERENTIAL	1
13	15-0044-F	FILTER,REPLACEMENT FOR QIX REGULATOR	1
14	U4003-0140-MK	MAINTENANCE KIT,PURAGUARD FILTER	REF

MAINTENANCE

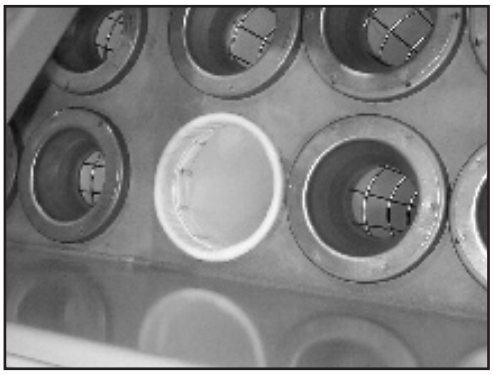
FILTER BAG REMOVAL

1 With **Ultra-Vac®** unit shut off and parking brake on, carefully climb on top of the collector body. Open all baghouse doors to gain access to filters and cages. Loosen the t-bolt clamps and rotate the blast pipes up and out of the way.

2 Remove cages by carefully pulling up and out of the filter bag. Be sure not to catch the bag on the cages. The baghouse will have 68 bags and cages.



3 On top of the filter bags, there is a snapband sewn into the filter bag. Simply fold snapbands in half and push bags through the tubesheet.



NOTE: **Do not pull filter bags up and out. This will bring dirty material up into the clean-side of the vacuum system which can cause serious damage to the blower. By pushing them through the tubesheet you can keep all dirt in the baghouse**

4 The bags can then be removed through the baghouse access doors located at the front and rear of the baghouse.

FILTER BAG INSTALLATION

1 Be sure the baghouse, tubesheets and plenum area is clean of debris.

2 Slide clean bags from top of unit, down into the tubesheet holes.

3 When bag reaches the snapband, fold the snapband in half and push down until the tubesheet fits into the groove in the snapband.

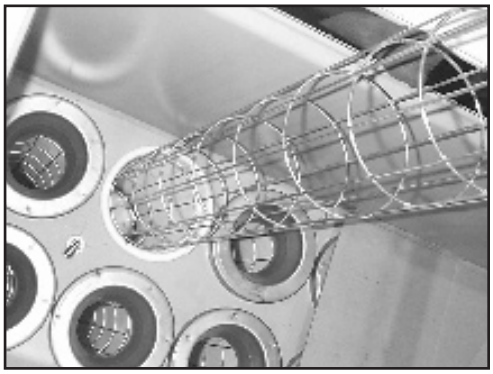
4 Unfold the snapband until it snaps back to round.

NOTE: **Snap band groove must fit tight in the tubesheet, or bags will not seal properly causing serious damage to Vacuum Pump.**

5 Inspect cages to be sure they are straight, no broken wires, and free of burrs and sharp edges that could tear the bags when installed.

6 Slide the cages down from the top. Be sure to slide straight down to keep from damaging the bags. The cages should slide tight against the tubesheet completely covering the bag.

7 Rotate the blast pipes back to their original location and tighten the T-handled clamp. Close the bag house doors and tighten the latches.



RECOMMENDED LUBRICANTS

1 Positive Displacement Vacuum Pump (Blowers)
Follow the recommendations of the blower manufacturers manual located in the Manufacturer's Manuals section.

2 Hydraulic System

a) All hydraulic systems furnished for use on **Ultra-Vac®** units will be supplied with AW-46 oil.

b) Tailgate locks and Pivot pins shall use a High Grade, Lithium base, No. 2 Bearing grease.

3 Engine
Follow the recommendations of the motor manufacturers manual located in the Manufacturer's Manuals section.

4 PTO
Dexron III transmission fluid.

5 **Lubricator (If applicable)**
ISO VG32 or equivalent

SCHEDULED LUBRICATION CHART

BLOWER HIBON 8702	GEAR END OIL	CHECK DAILY	CHANGE AFTER FIRST 200 HRS: CHANGE EVERY 1000 HRS or EVERY 6 MO. HEREAFTER	6.34 PINTS EACH IN DRIVE END & DRIVEN END	CHECK BLOWER MANUAL
	DRIVE END OIL	CHECK DAILY			
PTO	MAIN HOUSING	CHECK DAILY	CHANGE EVERY 300 HRS	12.25 QUARTS	DEXRON III
HYDRAULIC SYSTEM	OIL RESERVOIR	CHECK DAILY	ANNUALLY	35 GALLONS	AW-46 OIL
TANK	REAR DOOR CYLINDER REAR DOOR PINS REAR DOOR HINGE PINS TANK TIPPING PINS CYLINDER PINS	CHECK MONTHLY	CHANGE EVERY 100 HRS	1-2 SHOTS	LITHIUM #2 SHORT FIBER

LUBRICATION MAINTENANCE RECORD

OWNER _____

Ultra-Vac® SERIAL # UV- _____ **MODEL:** _____

MAINTENANCE PERFORMED BY _____ **DATE:** _____

RECORD Ultra-Vac® HOUR METER _____ **HOURS**

LUBRICATION PERFORMED	OIL DRAINED & CHANGED	OIL ADDED	GREASED
VACUUM PUMP			N/A
HYDRAULIC SYSTEM			
ENGINE			N/A
VIBRATOR LUBRICATOR			N/A
CLUTCH PTO	N/A	N/A	

DAILY CHECKS (before starting engine)

Perform the daily maintenance checks listed below and record on record sheet 1.

1 Vacuum Pump Oil Level

Checking the vacuum pump oil level is critical and should be done frequently. Some vacuum pumps have oil level sight gauges, and others have oil level plugs. Refer to the vacuum pump's maintenance manual located in the manufacturer's bulletins section, to determine proper oil level requirements. If oil is needed, see "Recommended Lubricants" in the "Maintenance" section.

NOTE: Unit must be on level surface to get an accurate oil level reading.

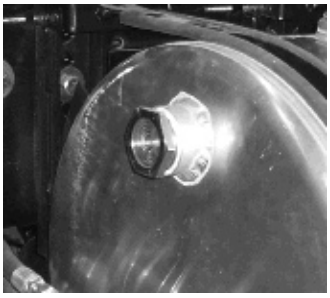
2 Engine Oil & Coolant Levels

a) Check engine oil when engine is cool to get a more accurate reading. Record on Daily Maintenance Schedule Record.

b) When engine is cool, remove Radiator Cap and check Coolant level. Record on Daily Maintenance Schedule Record.

CAUTION: NEVER REMOVE RADIATOR CAP WHEN ENGINE IS WARM.

3 Hydraulic Oil



Check oil level on site glass on the side of the Hydraulic tank. Record on Daily Maintenance Schedule Record.

4 PTO

Check the PTO fluid level in the sightglass located on the drivers side frame. Fluid level should be at the center of the sightglass. Add/remove fluid as appropriate.

DAILY CHECKS (engine running, clutch disengaged)

Perform the daily maintenance checks listed below and record on record sheet 1.

5 Compressed Air Pressure Switch

When the engine is started, watch the “Air Pressue Gauge” mounted on the rear of the battery box and the “Low Air Pressure” light. The light will stay lit until the gauge reaches 60 PSI. Record the air pressure at which the “Low Pressure” light goes out, on the Daily Maintenance Schedule Record.

6 Air Cannon

When the air cannon is turned on, listen for the air cannon to fire inside the baghouse doors. Watch the “Air Pressure Gauge” for a drop of about 30 PSI. This should happen approximately every 15 to 30 seconds. Watch the air pressure gauge pressure rise to approximately 100 psi and the air cannon should fire. Record on the Daily Maintenance Schedule Record.

7 Compressed Air & Hydraulic Lines

When the engine is started, inspect all air and hydraulic lines, fittings, and connections for leaks. Look on the ground under unit for drops or pools of oil and record on the Daily Maintenance Schedule Record.

DAILY CHECKS (engine running, clutch engaged)

Perform the daily maintenance checks listed below and record on record sheet 1.

8 Filter Bag Pressure Differential

A With the inlet to your machine open, Check differential gauge. Reading should be between 1" and 7" of water (H_2O). Record the reading on the pressure differential gauge in inches H_2O (water).

1. If higher than 10 inches of water, a visual inspection should be made for excessive buildup of material on the filter bag surfaces or bridging of material between bags. This can be done through the side access door.

Differential

9 No Load Vacuum

A With the inlet completely open and no hoses connected,check vacuum gauge reading. This "no load" reading is an important indicator of the condition of the unit. The "no load" vacuum should be about 1 inch of mercury (Hg). Record vacuum reading in (Hg).

1. If "no load" vacuum reading is zero (0),
   a. Inspect vacuum gauge plumbing for hose rupture, loose fittings, or plugged lines.
   b. Check that the box is properly seated on the standpipe and that there are no leaks.

2. If "no load" vacuum reading is higher,
   a. Check for obstruction in the cyclones and pipings by opening the top lids on each cyclone.

Vacuum

10 Dust Discharge

A Inspect the silencer for visible dust in the air stream.

NOTE: Shut the unit off immediately if dust is present. Any dust discharge should be corrected immediately to protect the vacuum pump.

B If dust is present, disengage the vacuum pump and shut down the engine. Check filter bags for rupture or leaks by opening the top access doors and looking for any signs of dust on top of the filter bags or under the inside of the top access door.

Discharge

WEEKLY CHECKS (before starting engine)

Perform the weekly maintenance checks listed below and record on record sheet 2.

1 Subframe Mounts

Check bolts holding the vacuum unit to the trailer chassis.
Record on Weekly Maintenance Schedule Record.

2 Electric Cable

Visually inspect all electrical conduit, cables, and connections for signs of abrasions or breaks.

WEEKLY CHECKS (engine running, clutch disengaged)

Perform the weekly maintenance checks listed below and record on record sheet 2.

3 Level Probe

Check level probe for operation by holding the paddle. Control panel must be on with the blower OFF. The “Hopper Full” light will turn “on” on control panel. If adjustment is necessary, refer to the level probe manual located in this operations manual. Record on the Weekly Maintenance Schedule Record.

4 Compressed Air Lines and Vacuum Leaks

Inspect all compressed air lines, fittings, and connections for possible leaks. Check the openings for possible damage to gaskets. With the machine running, listen for audible leaks around doors, hose connections, flanges, etc., and repair as required. Record on Weekly Maintenance Schedule Record.

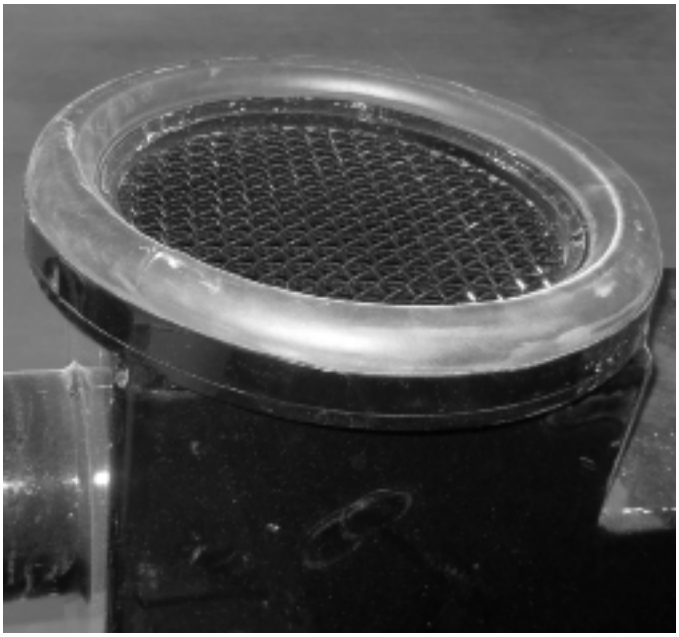
MONTHLY CHECKS (before starting engine)

Perform the monthly maintenance checks listed below and record on record sheet 3.

1 Vacuum Pump Lobe Wear

Check the vacuum pump standpipe screen for visible dust by raising the collector body. If dust is present remove the vacuum pump standpipe and remove the bolts around the standpipe, located on top of blower. Look for visible signs of wear on the tips of the vacuum pump lobes.

WARNING: Be sure to put safety prop in place before removing the standpipe.



2 Centrifugal Ring

Open tailgate and inspect the wear plate of the centrifugal ring on ceiling of box inside your **Ultra-Vac®** Unit. Repair or replace before it is worn through.

DAILY MAINTENANCE SCHEDULE

BEFORE STARTING ENGINE

NO.	ACTION	PROCEDURE
1	CHECK OIL IN THE VACUUM PUMP AND RECORD ON MAINTENANCE FORM #1	INSPECT SIGHT TUBES (4) ON VACUUM PUMP OIL SHOULD BE VISIBLE IN THE CENTER OF EACH TUBE
2	CHECK OIL IN THE ENGINE AND RECORD ON MAINTENANCE FORM #1	PULL THE ENGINE DIP STICK. THE OIL SHOULD BE UP TO MARK ON STICK.
3	CHECK OIL IN THE HYDRAULIC TANK AND RECORD ON MAINTENANCE FORM #1	INSPECT THE SIGHT GLASS ON THE SIDE OF THE HYDRAULIC TANK.

AFTER STARTING ENGINE BEFORE ENGAGING BLOWER

NO.	ACTION	PROCEDURE
4	CHECK COMPRESSED AIR PRESSURE AND RECORD THE MAXIMUM PRESSURE ON MAINTENANCE FORM #1	IMMEDIATELY AFTER STARTING THE ENGINE WATCH THE AIR PRESSURE GAUGE AND NOTE THE MAXIMUM AIR PRESSURE
5	CHECK THE AIR CANNON FUNCTION AND RECORD ON MAINTENANCE FORM #1	LISTEN FOR THE AIR CANNON TO EXHAUS AIR AND FOR THE AIR PRESSURE GAUGE TO DROP APPROXIMATELY 30 PSI. THIS SHOULD HAPPEN APPROXIMATELY EVERY SECONDS
6	INSPECT COMPRESSED AIR AND HYDRAULIC HOSES AND THE FITTINGS FOR WEAR AND LEAKS. RECORD ON MAINTENANCE FORM #1	LOOK AT ALL OF THE HOSES AND FITTINGS ON THE MACHINE AND ALSO LOOK ON THE GROUND UNDER THE MACHINE FOR DROPS OR POOLS OF OIL. ALSO LISTEN FOR AIR LEAKING.

AFTER STARTING ENGINE AFTER ENGAGING BLOWER AND WITH HOSE INLET UNCAPPED AT THE INLET

NO.	ACTION	PROCEDURE
7	CHECK AND RECORD THE FILTER BAG DIFFERENTIAL PRESSURE ON MAINTENANCE FORM #1	SET THE ENGINE SPEED TO 1900 RPM AND LOOK AT THE FILTER BAG DIFFERENTIAL GAUGE ON THE CONTROL PANEL
8	CHECK AND RECORD THE NO LOAD VACUUM ON MAINTENANCE FORM #1	SET THE ENGINE SPEED TO 1900 RPM AND LOOK AT THE VACUUM GAUGE ON THE CONTROL PANEL
9	INSPECT THE SILENCER DISCHARGE FOR VISIBLE DUST. RECORD ON MAINTENANCE FORM #1	SET THE ENGINE SPEED TO 1900 RPM AND LOOK AT THE DISCHARGE OF THE SILENCER IF THERE IS VISIBLE DUST, STOP THE MACHINE AND FIX THE PROBLEM
10	CHECK THE VACUUM BREAKER VALVE SETTING AND RECORD ON MAINTENANCE FORM #1	SET THE ENGINE SPEED TO 1900 RPM AND COMPLETELY COVER THE INLET TO THE MACHINE, THE VACUUM GAUGE SHOULD INCREASE STEADILY AND THE VACUUM BREAKER OPEN AT 27"HG AND CLOSE AT APPROXIMATELY 25"HG

WEEKLY MAINTENANCE SCHEDULE

(OR EVERY 40 HOURS OF OPERATION)

BEFORE STARTING ENGINE

NO.	ACTION	PROCEDURE
1	CHECK U-BOLTS HOLDING THE VACUUM UNIT TO THE TRUCK CHASSIS AND RECORD ON MAINTNANCE FORM #2	USE A WRENCH AND TIGHTEN EACH OF THE NUTS ON THE U-BOLTS HOLDING THE ULTARVAC TO THE TRUCK CHASSIS
2	CHECK OIL IN THE HYDRAULIC TANK AND RECORD ON MAINTENANCE FORM #1	INSPECT THE SIGHT GLASS ON THE SIDE OF THE HYDRAULIC TANK.

AFTER STARTING ENGINE BEFORE ENGAGING BLOWER

NO.	ACTION	PROCEDURE
3	CHECK HIGH LEVEL PROBE AND RECORD ON MAINTENANCE FORM #2	OPEN THE REAR TAILGATE AND ENTER THE COLLECTOR BODY AND STOP THE LEVEL PROBE PADDLE. THE HOPPER FULL LIGHT SHOULD TURN ON
4	CHECK THE COMPRESSED AIR SYSTEM FOR LEAKS AND RECORD ON MAINTENCE FORM #2	ALLOW THE AIR PRESSURE TO INCREASE TO ABOVE 100PSI TURN OFF THE ENGINE AND WATCH THE AIR PRESSURE GAUGE THE GAUGE SHOULD REMAIN AT THE SAME PRESSURE FOR MORE THAN 5 MINUTES

MONTHLY MAINTENANCE SCHEDULE

BEFORE STARTING ENGINE

NO.	ACTION	PROCEDURE
1	CHECK VACUUM PUMP FOR LOBE WEAR AND RECORD ON MAINTENANCE FORM #3	CHECK VACUUM PUMP BY LOOKING FOR DUST AROUND THE STANDPIPE SEAL IF DUST IS PRESENT REMOVE THE STANDPIPE AND INSPECT THE BLOWER LOBES.
2	CHECK CENTRIFUGAL RING WEAR PLATE FOR WEAR AND RECORD ON MAINTENANCE FORM #3	VISUALLY INSPECT THE CENTRIFUGAL RING WEAR PLATE FOR SIGNS OF EXCESSIVE WEAR REPAIR OR REPLACE BEFORE WORN THROUGH

MAINTENANCE RECORD FORM 1 "DAILY"

OWNER _____

Ultra-Vac® SERIAL # UV- _____ **MODEL:** _____

MAINTENANCE PERFORMED BY _____ **DATE:** _____

RECORD Ultra-Vac® HOUR METER _____ **HOURS**

BEFORE STARTING ENGINE

NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
1	CHECK OIL IN THE VACUUM PUMP				
2	CHECK OIL IN THE ENGINE				
3	CHECK OIL IN THE HYDRAULIC TANK				

AFTER STARTING ENGINE BEFORE ENGAGING BLOWER

NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
4	CHECK COMPRESSED AIR PRESSURE				
5	CHECK THE AIR CANNON FUNCTION				
6	INSPECT COMPRESSED AIR AND HYDRAULIC HOSES AND THE FITTINGS FOR WEAR AND LEAKS				

AFTER STARTING ENGINE AFTER ENGAGING BLOWER
AND WITH HOSE INLET UNCAPPED AT THE INLET

NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
7	CHECK AND RECORD THE FILTER BAG DIFFERENTIAL PRESSURE				
8	CHECK AND RECORD THE NO LOAD VACUUM				
9	INSPECT THE SILENCER DISCHARGE FOR VISIBLE DUST				
10	CHECK THE VACUUM BREAKER VALVE SETTING				

MAINTENANCE RECORD FORM 2 "WEEKLY"

OWNER _____

Ultra-Vac® SERIAL # UV- _____ **MODEL:** _____

MAINTENANCE PERFORMED BY _____ **DATE:** _____

RECORD Ultra-Vac® HOUR METER _____ **HOURS**

BEFORE STARTING ENGINE

NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
1	CHECK U-BOLTS HOLDING THE ULTRAVAC UNIT TO THE TRUCK CHASSIS				
2	CHECK ALL ELECTRICAL CONDUIT,CABLES AND CONNECTIONS FOR SIGNS OF BREAKS OR ABRASIONS				

AFTER STARTING ENGINE BEFORE ENGAGING BLOWER

NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
3	CHECK HIGH LEVEL PROBE				
4	CHECK THE COMPRESSED AIR SYSTEM FOR LEAKS				

MAINTENANCE RECORD FORM 3 "MONTHLY"

OWNER _____

Ultra-Vac® SERIAL # UV- _____ **MODEL:** _____

MAINTENANCE PERFORMED BY _____ **DATE:** _____

RECORD Ultra-Vac® HOUR METER _____ **HOURS**

BEFORE STARTING ENGINE					
NO.	ACTION	GAUGE READING	CHECKED OK	NEEDS REPAIR	REPAIRS MADE
1	CHECK VACUUM PUMP FOR LOBE WEAR				
2	CHECK CENTRIFUGAL RING WEAR PLATE FOR WEAR				

SCHEMATICS

OPTIONS

NONE LISTED

ACCESSORIES

MANUFACTURER'S MANUALS